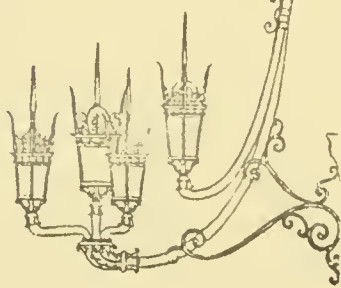


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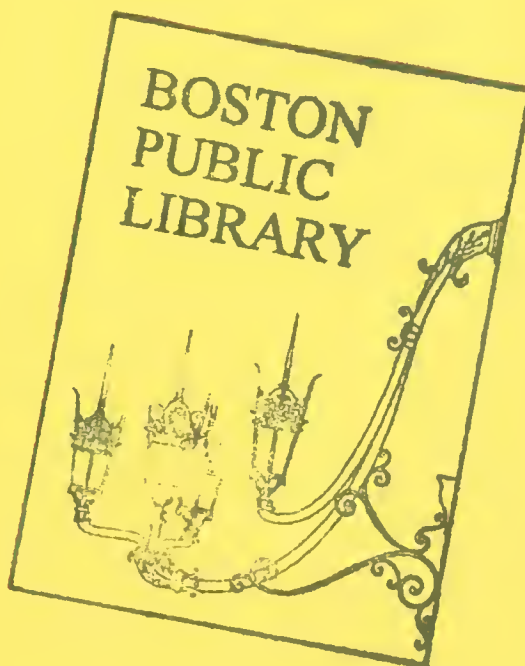
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SUMMARY

Throughout its history the waterfront has been the site of major facilities serving the Boston region. However, throughout that time, populations and the size of the area served has changed significantly. In early days when conflicts arose about the sitings of a facility, an obvious and relatively easy answer was to create new land. The extent to which this solution was drawn upon was dramatic. Entire areas of South Boston, East Boston, Charlestown and Downtown were created to accommodate the needs and demands of expanding commerce and technology. Today, the solution of filling land to meet new needs is not as easy. Cost considerations and environmental concerns impede that solution to the point where it is one that is usually drawn upon only after all other options have failed.

The resources of the harbor have been used extensively throughout history to connect Boston with its hinterland. The costs involved in siting facilities on the waterfront have not been distributed among the beneficiaries, and that imbalance has reached greater proportions today. Land on the waterfront has become a relatively scarce resource, and the conflicting demands between the localities

in which facilities might be sited and the benefits that derive from such facilities have been identified more clearly. In this paper we will explore three particular siting questions and the elements of the controversies around their siting: (1) the reuse of the Naval Annex and the location of port facilities; (2) the siting and expansion of Logan Airport; and (3) locating a Stadium in South Boston.

In the second chapter the concept of compatibility of uses and the allocation of waterfront space among residential, commercial and industrial uses is discerned. In this context we will look at particular neighborhoods: the Downtown Waterfront/North End; Charlestown; and East Boston. We focus on the reuse and redevelopment of waterfront areas in each of these communities. While all of these neighborhoods have undergone cycles of change that are reflective of the history through which they have passed, they represent a range of critical questions that define how waterfront land is being used. A sub-theme is how to better arrange transitions in land use, how is transition measured, and to what extent are future needs anticipated so as to be incorporated in a development program that is likely to span a decade.

A third major theme revolves around the interrelationship and problems surrounding recreation opportunities in the harbor, the issues of access to the waterfront, and the

constraints imposed by and undesirability reflected in the level of pollution in the harbor. Major consideration in this section is how one provides both for the costs of recreation and the costs of abating pollution. The other major issue related to recreation and pollution is the governmental morass that precludes the allocation and recognition of clear responsibility in each of these areas.

Another major theme is the role of surface transportation supporting and providing a necessary prerequisite for development. Changes in transportation technology have had a major impact in defining the use and obsolescence of facilities along the waterfront. This cycle is clear throughout the 300-year history of the waterfront, and today, some of the ground transportation/roadway network issues are among the most important in determining the future use and profile of the waterfront. Three particular projects can be discussed in this section: (1) Central Artery of Boston; (2) the controversy surrounding South Boston; and (3) the problems of cross-harbor traffic and their relationship to development in East Boston.

The fifth overall theme is the question of management of the harbor, looking at the question of who is in charge here. The arguments in favor of rationality suggest an overall harbor mechanism being created.

However, the obstacles to that direction are significant. The rapidity with which change has taken place and uses have been overturned along the waterfront is indicative of the importance of the waterfront.

How to manage and prepare for future development along the waterfront is as yet an unanswered question.

BOSTON'S WATERFRONT
ISSUES FOR TODAY AND TOMORROW

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INTRODUCTION

Since its founding in 1636, the City of Boston's fortune has been tied to its port and harbor. Like the sea, the waterfront of Boston lies today as the source of growth and new beginnings for the City of Boston. And, much as the sea has always presented a great challenge to man, the issues that arise along the waterfront of Boston present the City with some of its greatest conflicts.

In early days, ports operated as public highways under a laissez-faire economy. The fortunes of the great families of Boston Yankees were made in the Port of Boston, primarily through their China and West Indian trades. Today, ports operate more as public utilities; regulated, and demanding heavy public capital investment.

This change in the way that ports operate underlies the changes that have occurred within the harbor and along the waterfront of Boston. The waterfront was formerly Boston's front door -- its main access route. As changes in the technology of ports emerged, the harbor and waterfront became drab, private, proprietary, dark, dirty, noisy and closed to the public. In the past twenty-five years, Boston's redevelopment efforts sought to restore openness to the waterfront and to reclaim the waterfront for diverse use. The underlying

theme of this paper is the life cycle of the waterfront area. The discussion is organized in five sections:

- o Regional Benefits vs. Local Costs (and Benefits)
- o Development for Whom?
- o Recreation
- o Access to the Waterfront
- o Management of the Harbor

CHAPTER 1

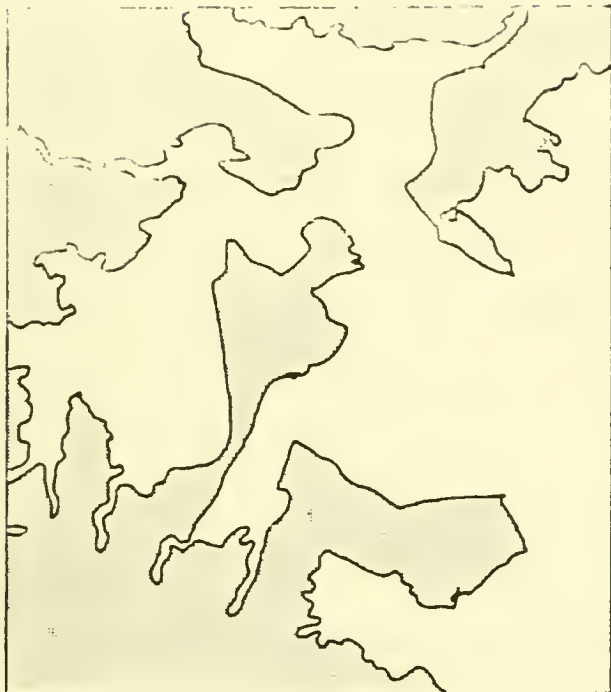
REGIONAL BENEFITS VS. LOCAL COSTS (AND BENEFITS)

In early days when conflicts arose about the sitings of waterfront facilities, an obvious and relatively easy answer was to create new land. The extent to which this solution was drawn upon was dramatic. The entire area of South Boston, East Boston, Charlestown, and Downtown was created to accommodate the needs and demands of expanding commerce. Today, with serious cost considerations and environmental concerns, filling land to meet new needs is usually only considered after all other options are ruled out.

The resources of the harbor have been used throughout history to connect Boston with its hinterland and, although there were costs involved in siting facilities on the waterfront that were not distributed among the beneficiaries, that imbalance has reached greater proportions today. Land on the waterfront has become a relatively scarce resource, and the conflicting demands between the localities; the facilities that might be sited in those localities; and the benefits derived from such facilities have been identified more clearly. We will explore three particular siting questions and the elements of the controversies around their sitings: (1) the reuse of the South Boston Naval

LAND CREATION IN BOSTON HARBOR 1800/1960

1800



1800 - 1950



1850 - 1900



1900 - 1960



Annex and the location of port facilities; (2) siting a stadium in South Boston; and (3) the siting and expansion of Logan Airport. In addition, we will consider the rehabilitation of the Boston Fish Pier.

SOUTH BOSTON

The waterfront of South Boston offers a case study of redevelopment of an industrial port area. "Commonwealth Flats", an area of nearly 300 acres in South Boston, was filled in by the Commonwealth of Massachusetts in the late 19th century to provide relief from the congestion of the downtown waterfront. Many different actors played a part in its development: New York, New Haven and Hartford Railroad located its Boston Terminal in this area; the Commonwealth of Massachusetts provided passenger and fishing facilities; and the U.S. Navy added a shipbuilding and repair annex to the Charlestown Navy Yard, while private firms developed warehousing. In the last fifteen years, the rail yards have been abandoned, the rail piers have been turned into parking lots, the Navy Yard has been decommissioned, the passenger cruise traffic has slowed to a shadow of its former self, the fishing industry has been depressed, and the wool warehouses have been vacated.

Five years ago this was among the most depressed areas of Boston. Today, it still appears abandoned, but

an array of plans from the public and private sectors make it a promising area for development in the next decade.

This area, separated from Boston's downtown business and commercial center by the Fort Point Channel, is attractive for development because of its good waterfront views, and its concentration of large parcels of land. The largest roadblock to development has been inadequate car and truck access. Because of the movement of industries away from the City of Boston during the postwar years, the goals for South Boston's waterfront include: providing jobs for Boston's resident labor force; maximizing and enhancing the property tax base of the City; and supplying sites for uses that are important to the City.

Two developments which meet these criteria are proposed for this area of South Boston, but they are stirring up a storm in the residential community. One is a major container facility at the 100-acre, former Naval Annex; the other is a sports stadium on the Fort Point Channel. Both of these proposals focus on the same problem -- the siting of facilities on the water which have significant negative impacts for the immediate neighborhood, but benefit the larger metropolitan area which they serve.

A MAJOR CONTAINER FACILITY

The arguments of those opposing the use of the South Boston Naval Annex for seaport development present a particular irony, since it was precisely such activities that helped secure Boston's fortunes and future. However, the industrial era removed the port from sight; it was closed off into self-contained, private, remote areas by filling the harbor for the express purpose of separating the port from other areas of the city. The entrance to the harbor in South Boston is removed from any contact with the city's residents, and the major container terminal is remotely located under a bridge and on the mouth of the Mystic River.

Changing technology in the port has also contributed to its isolation. No longer are the hundreds of men needed to load and unload ships. Containerization, in improving the efficiency in moving cargo, has diminished the number of jobs involved in the maritime trade directly, and in so doing, lost a major constituency to support its development needs. Even the businesses of Boston, those which grew out of the fortunes amassed through the China and West Indian trades, now only maintain their connection with the Port of Boston through nostalgia. While the board rooms of Boston's major skyscrapers are lined with pictures of the old clipper ships, attention has now shifted to the airport, only two miles from downtown Boston.

The seaport community likes to remind the City that it built the new City Hall with its back to the port, and this fortress-like back side represents to the seaport community the resistance they feel meets their every attempt to expand the maritime facilities in the Port of Boston.

The South Boston Naval Annex has for some years been recognized by most observers, including the authors of the state's Coastal Zone Management Plan, as the best remaining site in Boston Harbor for port development. It is an industrial area, has waterfront depths of 35 to 40 feet, 100 acres of supporting backland, and is sorely needed for port expansion. The area is instead being used for a variety of non-maritime uses. The political quagmire into which this property has sunk is an excellent example of the worst case of land use decision-making. The city finds itself unable to make long-term commitments to users who would develop the site and benefit from its waterfront location because of continuing negotiations with the Port Authority who wish to build the seaport. Port expansion, on the other hand, has been stalled for two years waiting for the results of discussions with the city. Neither political entity is satisfied and the site remains underutilized. Since the property lies under a flight path to the airport, it can be assumed that industrial reuse of some kind will occur, but whether or not it

will be maritime-related is still an open question. The inability of the city and the Port Authority to reach agreement on the use of this site has had negative impacts beyond the boundaries of the site. Joint plans to develop adequate truck access to this portion of South Boston have been shelved pending resolution of the disagreement, and efforts by the Redevelopment Authority to guide the comprehensive reuse of the waterfront area beyond the Naval Annex have been stymied.

The neighborhood and city arguments against new Port facilities are reasonable and simple -- not enough jobs and no help on taxes. The regional economic benefits of a seaport facility which consumes a large land area and produces a low jobs-to-acreage ratio don't lend themselves easily to a simple explanation. Yet, as technological developments have always shown, those who choose not to embrace them may become the modern-day Luddites. Trade and commerce within a large metropolitan, even multi-state, region is an imperative -- the life blood of its economy. So, the public sector today is left the onerous task of balancing arguments that transcend jurisdiction and outlast political lifetimes.

And yet, the neighborhood arguments are also compelling. It is they who endure any noise, congestion and pollution generated by new facilities. They are left almost no other alternative than to raise obstacles, however temporary, asserting that they are the ones who

"pay" for the facility by absorbing its unintended consequences. It is likely, however, that this shouldering at the local level of major regional transportation facilities will carry increasing weight in siting decisions. (Redistribution mechanisms will have to be found so that the neighborhood or the municipality in which major facilities are sited will receive some direct, as well as indirect, benefits for housing such facilities.)

A SPORTS STADIUM

A major sports stadium is proposed for a 30-acre parcel on the Channel. It would provide a large arena and would have to accommodate a parking garage for over 2,000 cars. The complex would be constructed and managed by public authority which would issue tax exempt revenue bonds to finance the construction, estimated at approximately \$50 million. The bonds would be secured by the leases of the principal users and guaranteed by the Commonwealth. Public benefits that would derive from the development are cited as follows: new sales, hotel, and meal taxes. It is this public purpose that is being defined as the basis for issuing tax exempt bonds.

This proposal for a stadium being located in South Boston is more difficult to support than that for a maritime facility. There is no requirement that a stadium be located on the waterfront, and the residents

of South Boston are convinced that their residential streets would be even more impacted by a stadium than a container facility. Locating a facility that will have major peaking congestion problems on a peninsula which, in the best of circumstances, has to have limited access and egress is enough to stir outrage in a community which prides itself on its support for not only its local sports leagues, but for all of Boston's home teams.

Boston's original sports stadium, the Boston Garden, and Boston's original port terminals were financed by local entrepreneurs and later, in the instance of the port facilities, by the railroads; reliance for financing is now in the public sector. This, in turn, means that the discussions about what should ultimately be done about the two proposals for waterfront development in South Boston are open to a wide range of participants which will undoubtedly delay, and could even prevent, the building of a facility. On the other hand, it is also a way to ensure that problems will be raised and addressed even if they are not ultimately solved.

LOGAN AIRPORT

For the past thirty years, Logan's air traffic growth has engendered a continuing dispute between the airport and its neighbors which shows no signs of lessening within the foreseeable future. The intensity and duration of

this unending contest overshadows any other in the history of waterfront development in metropolitan Boston. In part because of its size and the particular impact of its technology, but mostly its proximity to the center rather than the fringe of a metropolitan area, Logan Airport exemplifies the failure of local, state and federal agencies to manage the growth of a new transportation technology in a way which does not threaten the viability of the urban community.

Urban waterfront airports are by no means uncommon in the U.S. -- Kennedy, LaGuardia, San Francisco, Oakland, San Diego, Washington, and National are all examples. Their siting was a consequence of two factors: the economical creation of level land by land fill in shallow estuarine waters and the prevailing political rule-of-thumb that such areas were wastelands suitable only for the disposal of garbage and unsuitable for development of deep water marine terminals. In these respects the siting of Logan Airport was no different from the others in its class. But other factors were significant as well, and deserve further mention.

Logan Airport was born officially in 1923 as Boston's airport on a 200-acre parcel of land adjacent to Jeffries Point in East Boston. The site had been created from dredging spoils deposited there by the Army Corps of Engineers prior to World War I while dredging the main

ship channel to Boston's inner harbor. Appropriately, the site was leased to the Corps of Engineers, which constructed facilities for use by the aircraft division of the National Guard. Later, in 1928, the City of Boston assumed the duties of lessee and added an additional 400 acres during its decade of management. By the beginning of World War II, the Commonwealth once more resumed control of the airport, placing it under the jurisdiction of the Department of Public Works, which planned to develop Logan into a major airport.

Delayed by the war, this plan was quickly consummated at its end with the filling of 2,000 acres of tidal flats with spoils dredged from surrounding waters. Two harbor islands, Pea Island and Governor's Island, were leveled. By 1948, nearly all the present land area of Logan had been created. In the ensuing ten years, the present runway pattern was established. Although the period from 1958 to the present was one of considerable construction of terminals and airfield improvements, there were no sizeable additions to the airport area (although there were several very controversial minor additions, discussed below). In retrospect, the irrevocable decision about Logan was made well in advance of the appearance of significant controversy over its operations.

There are several factors which might account for the ease with which Logan was expanded in the late 40's.

The pent-up demand for civilian public works, created by the lean war years, found a model project in Logan. As noted previously, other major cities were engaged in shallow water land fill projects to create airports -- it was clearly the trend. It was also the heyday of the public works engineer. The siting of public works was decided on technical grounds and human communities had to rearrange themselves according to the technical imperatives. Even so, there appears to have been no conscious pause on the part of the Department of Public Works to determine whether a site other than East Boston would be more suitable for a metropolitan airport.

There was indeed some resistance to the public works expansion of Logan in the later 40's. It foreshadowed the escalating conflicts of the 60's and 70's. But most large scale waterfront projects, such as the construction of the Mystic River Bridge, proceeded smoothly as thousands of inhabitants meekly yielded their houses in the interests of "progress".

Noise from commercial jet aircraft is an endemic problem for many urban airports. In Boston, aggregate noise exposure has increased rapidly in the last two decades because of the replacement of propeller-driven aircraft by jets and the growth in number of flights at Logan. Unlike many other airports, residential population within the high noise zone has decreased. Land use

trends in neighboring communities have shown some tendency to accommodate to airport growth, but not vice versa.

A major factor in the persistence of the airport/community controversy is the reluctance of community groups to relinquish land in high noise zones which is no longer suitable for human habitation. As the airport resisters view it, the virtual expropriation of habitable land by noise intrusion is reversible through future improvements in aircraft technology and restrictions on airport operations. Their objective is to shrink the tolerable noise contour to within the airport boundaries, thereby preserving for indefinite future residential use the land area which was encroached upon in the expansion of the late 40's.

An auxiliary issue of great symbolic importance was the disposition of park and recreation lands in East Boston during the period of state assumption of responsibility for the physical expansion of the airport land areas. While the amount of such land was small (compared with the airport), East Boston was singularly short on park space compared with other sections of Boston.

The reshuffling of public park and recreation space in East Boston to accommodate airport growth proceeded for twenty years. An early decision (in the late 40's) to sacrifice Amerena Park and Wood Island Park to airport needs in return for a sports stadium and bathing beach

less suitably situated to residential areas did not arouse great public opposition at the time. It was consistent with the then current practice of using park land for highway construction, especially to avoid encroaching on homes. But by the time Wood Island Park was leveled in 1968, after a lengthy legal and political battle to prevent its incorporation into Runway 15-33, public opinion had switched to regard such land use conversions as undesirable. Today, a decade later, taking of urban public park land for airport expansion is unthinkable.

Wood Island Park was more than a nondescript, undeveloped land parcel. At the time that he designed the extensive park system of Boston, Frederick Law Olmstead prepared a plan for developing Wood Island Park, probably one of the first waterfront parks in the nation. The original plan was never brought to fruition, although some of Olmstead's ideas were incorporated into the city park at Wood Island.

In their desperate but losing battle to save Wood Island Park from the bulldozer's scraper, community groups were trying prematurely to stem the local and national tide of concrete and asphalt which oozed through parklands and residential neighborhoods in the 50's and 60's. A decade later, ambitious inner city highway programs were scrubbed as threatened neighborhood groups coalesced to blockade the highway buffs from invading city streets and recreation areas.

In downtown Boston an elevated highway, the Central Artery, intrusively slices through the center of a redeveloping area which extends to the waterfront. Constructed during the feverish fifties, the Central Artery is considered a major inhibition to future development of the CBD and is slated for depression into an underground thoroughway - an exceedingly costly correction of an old mistake.

Will Logan Airport be considered the "Central Artery" of the twenty-first century?

FISH PIER

Fishing is Massachusetts' oldest industry. As early as 1636, the cod became the symbol of Massachusetts and by 1700 codfishing became the staple of the Port of Boston's export commerce to the West Indies and to Europe. Boston was primarily a fish marketing port and remains so today. Most fish was handled in Boston and distributed throughout New England and the East Coast. In 1912, the Fish Pier was built to help relieve the congestion at other wharves in the harbor. It was the largest and most modern plant of its kind in the world, with some of the most sophisticated equipment for fish handling, including its own ice plant with a tiny railroad on the roof capable of distributing ice to each dealer, a cold storage facility, a central heating system, and a telegraph communication system.

In 1920, the Pier processed more than 750,000 pounds of fish a day and distributed more than 150 million pounds a year. In 1978, only about 21 million pounds were landed by the Boston fleet, while in 1936, 339 million pounds were landed.

World-wide fishing characteristics and the American trade deficit have resulted in physical and operational changes at the Fish Pier.

IMPORTED FISH AND THE 200-MILE LIMIT

The first sign of imported fish as a major entry into the American market came after World War II. U.S. government contracts for fish ended with the war. Other nations became interested in reconstructing their fishing fleets and offered large subsidies, substantial portions of which came from U.S. Marshall Plan funds.

The popularity of Georges Bank, off the New England coast, as a major source of groundfish became an issue in the 1960's when foreign fleets outnumbered domestics. The modern foreign fleets could stay out almost three months with a crew of 60, and process almost 250 tons of fish a day as opposed to the small 10-man crews of the New England fleets which could not equal the output.

This impact was devastating on the domestic fleet and the domestic fishermen. Unable to compete on the scale of the foreign vessels, the New England industry

suffered. With the decline in the fleet came a subsequent decline in the number of wholesalers and processors.

In 1973, the "200-Mile Limit Bill" was introduced in Congress; it became law three years later. In essence, the law states that the jurisdiction of the United States is formally extended over its fishing resources to 200 miles. Foreign trawlers may fish within this area, but only after applying for a permit. The immediate effect of the law was that the amount of fish caught by foreign fishermen plummeted sharply, while the opposite was true for domestic fishermen. While the full impact of this law is not expected to be felt for about five years, the overall success to date has been encouraging. Foreign fishing has declined in these waters and depleted stocks have now begun to rebuild. But, for the 200-mile limit to be of importance to the Boston fishing fleet, the rehabilitation of the Boston Fish Pier, and modern facilities for the dealers are mandatory.

A \$6.5 million grant from the Economic Development Agency is earmarked for the rehabilitation of the Fish Pier. Not only are structural modifications and space utilizations taking place, but various methods of management and operations have also been analyzed. Among the improvements that will be made are: new heating and ice-making systems, reorganized traffic patterns, and innovative delivery and disposal methods.

There are problems, however, associated with renovation of the facilities. Most of the present tenants at the Fish Pier are immersed in their long-standing ways of loading and processing fish. The group is a highly-competitive conglomeration of small businesses, but for development to occur they must work together and face an issue that is particularly threatening to them -- the introduction of new technology to accomplish the unloading and distribution of the fish. So that while the redevelopment and renovation of the Fish Pier does not appear to pose problems for its neighbors in ways that are outlined in the other cases described, the internal disruption that is created among those most affected by this is an equally important aspect of change that must be documented. Only if the facilities accommodate new technology and "come into the 20th century" will there be a long-range future for the fishing industry in Boston Harbor.

CHAPTER 2

DEVELOPMENT FOR WHOM?

An important issue in the development of Boston's waterfront is the compatibility of uses and the allocation of waterfront space among residential, commercial and industrial uses. Each of the neighborhoods discussed here -- Downtown Waterfront/North End; Charlestown; East Boston; and South Boston -- have undergone cycles of change that are reflective of the history through which they have passed, and represent a range of critical questions that define how waterfront land is used. At the same time, we will consider how to better arrange transitions in land use; how transition is measured; and to what extent future needs are anticipated so as to be incorporated in a development program that is likely to span a decade.

Public action during the past decade has made dramatic changes along Boston's Downtown waterfront. Initially spurred by funds from the federal urban renewal program, waterfront redevelopment continues to occur at a rapid pace financed by both private and public dollars. Revitalization is occurring in two quite different types of waterfront property in Boston.

The first type of redevelopment is the restoration and revitalization of the pre-industrial downtown waterfront

with its massive brick and granite wharf buildings. The scale and construction of this area lends itself to rehabilitation and restoration, capitalizing not only the waterfront location but also on the historic tradition of the old port and its architecture. The proximity to downtown makes development of these properties for residential and commercial use appropriate.

The second type of redevelopment is in the former industrial port areas, such as the abandoned rail yards and piers of South Boston and East Boston and Charlestown. These areas offer considerable acreage but without the historical buildings and ambience of the older central waterfront. They divide themselves with opportunities for industrial/port reuse in South Boston or combined new/old for development of commercial/residential/industrial areas in East Boston and Charlestown.

In the past 20 years there has been a significant loss of population from Boston's waterfront and Boston neighborhoods, including those along the waterfront. Historically, the population of the waterfront neighborhoods was directly related to waterfront located jobs such as cargo handling and ship building; however, technology changed that and as the shipyards closed or diminished their numbers of employees and the old port facilities were abandoned, the connection between the waterfront and the adjacent neighborhoods became more tenuous. In

recent years, as the opportunity for redevelopment of the waterfronts became a real possibility, the neighborhoods' interest in the waterfront reawakened.

DOWNTOWN WATERFRONT

The opportunities presented by the revitalization of downtown waterfronts became obvious in the early days of urban renewal. These areas presented an immediate opportunity for investment that would not require massive movement of people, and they were close enough to downtown that renewal and resurgence could only enhance the focus that urban renewal had already directed to downtown. The waterfront development program which began in Boston in the early 1960's and is still underway raises two important issues for the future uses of waterfront lands.

(1) What happens when you create a new neighborhood?

After the completion of two, 40-story towers on Boston's waterfront, a major controversy arose around the remainder of the urban renewal plan not yet under construction. The residents who had moved into the new structures along with a few waterfront pioneers who inhabited one or two of the unrehabilitated waterfront buildings, created a new constituency for what they saw as their neighborhood.

(2) How should a major new development relate to its neighboring areas? In this case, the waterfront development must be considered in relation to both the Downtown area, to which it was oriented originally,

and the North End, which saw itself as being the most impacted.

The waterfront project includes 1,800 housing units in new or renovated buildings, an aquarium, marina, new restaurants, stores and offices; and a pier used by harbor tour boats. The plan, drawn up with extensive business interest participation but without significant involvement of neighboring residential areas, was oriented to the water and to downtown Boston's government center and financial district. The major waterfront street has been relocated and ramps to the Central Artery removed to provide pedestrian access from downtown and from the enormously successful adjacent Quincy Market area. The focal point of activity is the popular waterfront park. Its aim was to restore the vitality of this area lost when the port moved to outlying areas over 100 years ago.

Waterfront development in Boston is slated to occur in an area adjacent to one of its most colorful, dense, ethnic neighborhoods, the North End. The Italians who inhabit the North End are fiercely turf-conscious, and have maintained a protected neighborhood enclave which has withstood the kinds of pressures that forced many of Boston's other neighborhoods into rapid change in the 1950's and early 1960's. Surrounded by water and cut off from the rest of the city by the Central Artery, the North End was a self-contained, secure, colorful

neighborhood which viewed the redevelopment of the waterfront skeptically. At best, it could only be a mixed blessing. New waterfront development could divert shoppers from the bustling Haymarket area whose meat and fruit markets served an entire region. It would open up the area to newcomers, a force fiercely resisted by the present residents. And, as this development proceeded along the lines of the very earliest urban renewal plans, there would be little opportunity for the North End to say very much about what was happening.

Residents of the North End are predominantly working and middle class. A large proportion are now elderly. The North End saw the opportunity available in a developing waterfront to accommodate their needs for elderly housing, relief from the congestion that made moving through their double-parked streets impassible, for open space that was oriented to the needs of the elderly and the remaining young families in the area, and the opportunity for North End entrepreneurs to have a role in the financial rewards that such development would bring. However, in the original plan for waterfront redevelopment, luxury housing predominated in the form of high-rise towers, reclaimed pre-industrial granite wharf buildings, hotels to serve tourists, an Aquarium, museums, and a large park. These magnets would bring the tourist and the suburbanite into the city, but the new waterfront would become the exclusive domain of

the well-to-do. The timing of waterfront development in Boston was delayed by the usual problems encountered in major renewal projects -- approvals of financing, demolition, utilities, etc.

Passage of time in this instance, however, presented a real opportunity that was seized by the earliest waterfront residents and the North End populace.

A court suit was brought by the earliest waterfront residents and developers to restrain the Boston Redevelopment Authority from proceeding with the original plan. In the course of resolving the outcome of the court suit, the North End became more aware of what was happening in its back yard and demanded a role in the resolution of downtown waterfront redevelopment. As a result, the original downtown waterfront plan was redone with extensive participation this time by both the new waterfront residents and the North End.

As in most long-fought and hard-won battles, the results stand to benefit a far broader range of interests than was first envisioned. The waterfront of Boston now comprises two major elderly housing developments, and the mixed income housing use of an imposing granite mercantile building has extended the diversity of the population on the waterfront well beyond expensive high-rise Harbor Towers and Lewis Wharf condominiums. The waterfront park has a major orientation to the North End,

drawing its young children and elderly folk, as well as a face to the water which is the culmination of Boston's "walk to the sea". This battle over the future of Boston's waterfront headlined a message that was not lost on the other waterfront communities in Boston.

Two other major waterfront communities, Charlestown to the north and East Boston across the harbor, have learned from the lessons of the downtown waterfront. The residents of these neighborhoods have played a major role in the planning for reuse of old waterfront properties in their respective neighborhoods. In each of these instances some major themes prevail:

(1) population loss; (2) population re-orientation from waterfront jobs; (3) long-term future needs (changes) vs. extension of the present; (4) investment; (5) park magnets. Major parks are being located as magnets for other waterfront development. The ownership and maintenance of these parks is an issue and problem. A city can only support a limited number of waterfront parks because of their heavy requirement of maintenance funds. However, neighborhoods are demanding that open space be provided to them on their waterfronts and neighborhood residents themselves are laying strong claims to the history that their waterfront areas represent for them.

Property Of
BOSTON RECORDING AUTHORITY

CHARLESTOWN WATERFRONT

The Navy Yard in Charlestown, decommissioned as a shipbuilding and repair facility in 1974, has seen a combination of rehabilitation and new development. Commissioned in 1797, the Navy Yard grew through a series of land fill projects during the 19th century to 130 acres on the mud flats of the Charlestown waterfront. While the South Boston Yard had been vacant for some years at the time of its decommissioning, the closing of the Charlestown Yard in 1974 meant the loss of some 5,000 skilled jobs.

From the start the city's strategy was to take advantage of the site's waterfront location in planning for its reuse. The resulting redevelopment includes the newly established 23-acre Boston National Historic Park, home of the U.S.S. Constitution and a 16-acre park now under construction which will provide access to the harbor for Charlestown residents long cut off from their waterfront by the Navy Yard. The remainder of the site is being developed for mixed residential/commercial activity which, when completed, will include 1,200 new housing units, a 700-1,000 room hotel, commercial, office, loft, and light industrial space. Where possible, these uses will be incorporated in the adaptive reuse of the Navy Yard's historic buildings. In other areas the focus of development will be new construction. The project

represents a total public sector investment of \$17 million. It is estimated that when completed the redevelopment of the Charlestown waterfront will create 1,300 permanent jobs, generate \$3 million in tax revenue annually, and substantially improve the quality of life for both new and old residents of Charlestown.

CHAPTER 3
RECREATION

WATERFRONT PARKS

The star of Boston's waterfront development is its 4.5-acre waterfront park. While the park was always considered part of the waterfront plan, the size, use and orientation of the park became the subject of bitter controversy in the development of final plans for the waterfront (as discussed previously). While the City was eager to open up the waterfront to extensive use, the costs of building and maintaining parks was becoming an increasing problem not only here, but in all cities.

Similarly in Charlestown, the park was to be the focus of the redevelopment of the old Naval Shipyard. With the U.S.S. Constitution as its star attraction, the draw of the park also provides the base on which retail and commercial development depend for their economic viability. Although in both instances the development funds for the park have come from the federal government, the park in Charlestown shall also be maintained and operated by the National Park Service; that is precluding any problem that might have occurred within the City. In East Boston, the 35 acres comprising former maritime

facilities at Piers 1-5 remain relatively underutilized. The community in East Boston up until very recently has seen this location as replacing the parks at Wood Island and Amarena Field lost to airport expansion. While those original parks comprised over 60 acres, the residents of East Boston have been "willing to settle" for the piers as compensation in kind. However, the piers have remained unused for this purpose in the three years since it was publicly defined as Port Authority policy to divest them for some community-related purpose of which a park was expected to be at least a part. In the meantime it has become quite clear that the City of Boston is reluctant to create still another large waterfront park for all the reasons stated above. However, what is far more likely is that a portion of whatever development is undertaken at this location will include provisions for not only a park but more public access to the water's edge.

PUBLIC ACCESS

Public access in general has become more in demand as waterfront areas have been redeveloped. In all of the neighborhoods in Boston, local residents were cut off from the water either by military facilities such as in Charlestown, or by commercial and industrial uses as in East Boston, Downtown, and South Boston. The proprietary holdings did not allow for any public entrance. The urban

General plans for Downtown Boston originally hoped to achieve a public access perimeter along all of the piers and wharf areas. Little by little their hopes have been reduced to selected areas open to the public based primarily on the willingness of individual owners to allow non-residents around their properties. The reasons most frequently cited for exclusion are security and liability. The new residents moving into the high-income housing located directly on the water are not inclined to allow the general public into their front yard. They already view many of the attractions meant to bring people to the waterfront as being incompatible with their new residential location.

THE HARBOR ISLANDS

The more than 30 islands in the harbor total an approximate 1,200 acres and they lie within a 25-mile radius of a population in excess of 3,000,000. With the passage of the Boston Harbor Island bill in 1970, all of the islands are now under public ownership. A number of the islands have been re-opened to the public with many of their attractions available to the general public for the first time in many years. Last summer 150,000 people visited the islands and while reasonable cost transportation is now available to the islands, there is no well-identified focus from which this transportation can be offered on a

long-term basis. In the plans for the waterfront, a terminal for ferry service to the islands, as well as for other ferry activities for Boston Harbor was located at either Rowe's or Long's or Foster's Wharf. However, even 10 years after the Harbor Island bill was passed, that issue has not yet been settled. Neither the City nor the State has been successful in putting together the necessary elements of funding and support facilities that would make the project feasible and acceptable to all concerned. As a result, the resources that would be necessary to attract even larger numbers to the islands have not been available and the cycle of lack of resources and lack of demand remains unbroken.

COST/RESOURCES

There is no clear, large, local voting constituency for the Harbor Islands. Responsibility for improving and maintaining them is divided among three different governmental agencies. The amount of money available is neither sufficient nor well-coordinated. However, since the demand for water-related recreation is outstripping the growth in population, the funding may change in future years.

HARBOR POLLUTION

Boston's inner harbor suffers from considerable pollution. The treatment plants located on islands in the

harbor have been major contributors to the pollution but the more important problem is that of overflow from the combined storm sewers throughout the City which dump raw sewage into the harbor when they overflow. This not only presents a health hazard, but is unsightly. The issues of pollution and recreation have been inextricably tied in Boston Harbor for the past two centuries. Pollution and recreation present an interlocking set of problems and opportunities with pollution severely constraining the rehabilitation potential of recreational resources in the harbor. The problem is enhanced by the confusion of jurisdictional responsibilities and the maze of local, state and federal agencies that have a role financing, regulating and managing pollution abatement. This labyrinth of bureaucracy excludes any effective citizen effort at marshalling the resources to accomplish the job at hand. As the new waterfront areas are developed, however, a far more vociferous and self-interested constituency will be growing and is expected to focus on the amenities for which they are paying dearly.

CHAPTER 4

ACCESS TO THE WATERFRONT

GROUND NETWORK

Changes in transportation technology have had a major impact in defining the use and obsolescence of facilities along the waterfront. This cycle is clear throughout the 300-year history of the waterfront and today, some of the ground transportation/roadway network issues are among the most important in determining the future use and profile of the waterfront. Three particular projects will be discussed in this section: (1) Central Artery of Boston; (2) the controversy surrounding the location of an improved access road in the industrial area in South Boston; and (3) the problems of cross-harbor traffic and their relationship to development in East Boston.

The areas of significant waterfront development that have been discussed in the earlier sections -- Charlestown, Downtown Boston, South Boston, and East Boston -- have all suffered in recent history from the difficulties imposed by the ground transportation system. A major element in defining the redevelopment potential for these areas has been the requirement to provide new means of access and circulation to and through these areas. In areas like the waterfront, the question of

depressing Boston's Central Artery has become a major issue. Its outcome is still uncertain. In South Boston, the provisions of a new circulation pattern is essential to the development of the entire northern portion of that peninsula where the significant maritime and industrial development is planned. The circulation system to and within the South Boston area is severely constrained by old bridges, limited capacity, as well as a street system that was not planned to the level of automobile and truck traffic that would emerge from intensive new development. However, in South Boston a program to define the appropriate alignments for a "Seaport Access Road" has been stymied by the debate over the location of the stadium. At the present time, local residents have "held this project hostage" until they get a clearer signal that the stadium will not be located in South Boston. The outcome of this tactic is that redevelopment of the industrial area is being slowed down since a new circulation system is a critical first step.

DEVELOPMENT OF ROAD NETWORK

Boston is fortunate. Its early development as a port city was based on its unique topography of peninsula and deep water. Its closeness to England got it off on the right foot and established its early primacy in North America. This primacy was held long after economic conditions changed and worked against Boston's retention

of its position as a dominant Atlantic port. The factors that have determined the rise and decline of the port have been its physical and locational characteristics, the development of local rail and road transportation facilities.

After World War I, Boston's port declined to the point where it was no longer of major national or international importance, although it did continue to play a role in serving the New England region. During the same period, shifts were coming about in ground access to and from the port. Trucking emerged as a more fine-grained mode for the transport of goods. As the road network was improved, the trucking industry was encouraged in its competition with rail lines.

ACCESS AND PORT USE AND DEVELOPMENT

For the most part, the configuration of maritime and industrial development along the waterfront in Boston has been determined and designed with rail as the predominant mode of transport to and from the port. With the decline of rail, the roadway system in and around the port areas proved to be totally inadequate to the demands of the automobile and truck. Equally importantly, new loading and unloading technologies required by the trucking industry in the form of containerization demanded a different type of facility entirely.

Maritime uses as well as the future development in the Port of Boston are constrained today by landside transportation and are dependent upon improvements to land transportation for their growth or reuse.

EAST BOSTON

East Boston was and, despite heavy filling, remains a peninsula connected by land to the mainland only to the north. Its connections both Downtown and to the regional expressway network are via tunnels under Boston Harbor. Several small bridges connect the peninsula to the west and to local streets. These connections to the outside world are a major constraint on the redevelopment of port facilities, the harbor in East Boston, and to all other future development options as well. Few of East Boston's local streets connect directly to the network of express routes out of Boston and almost no port-serving roads connect to these highways except via local residential streets.

East Boston Harbor is divided into several sections. Piers 1-5 would have to be rebuilt if containership activities were to be sited here; land available for storage and service to container activities would be severely constrained by the immediately adjacent residential area.

The remainder of the water's edge in East Boston is in the process of being transformed to uses which are

not port-related, and this area too is accordingly constrained by groundside access. As the oldest portion of the East Boston port area, the waterfront served the clipper ship era well, but present port uses are constrained by lack of space and by deficiencies in the access roads which serve them. The availability of transit access to community centers has contributed to the reuse of parts of the waterfront. A new school and new housing now occupy part of the old port frontage and its future development will continue in this direction.

A roadway of limited dimensions to connect this area to the expressway network could be constructed along an old rail right-of-way. The issues raised by building a roadway in the present right-of-way are that it will only reinforce the barrier that the rail cut now represents. Another alternative or costly possibility is to fill the right-of-way and to create an arterial street so as to remove the barrier and to improve access at the same time. Even with this new harbor connection, road users would be constrained by the existence of the tunnels for outside connections. The tunnels are severely congested at the present time and limit movements of certain types of cargoes and vehicles. A third harbor tunnel has been proposed and would serve this area via the proposed road in the rail right-of-way, but the same

tunnel limitations would prevail for truck access between this portion of the port and the expressway network.

SOUTH BOSTON

South Boston, also a peninsula, is constrained by its bridge connections. It contains the only area of the city constructed primarily as a port area, the northern half of which is still port and industrial in nature. Recent events have made it the area with the greatest potential for new port-related and other uses. The decommissioning of the South Boston Naval Annex provided a vast amount of land which, coupled with the vacant land formerly occupied by rail yards, affords a major opportunity for new development.

Proposals for ground access in this area have focused on new connections to existing expressways. A seaport access road has been recommended to provide more direct connections to the Southeast Expressway, the Massachusetts Turnpike and the Central Artery. The seaport access road in South Boston is the key ingredient in development of the industrial portion of the South Boston peninsula. Without it, the traffic generated by development at the South Boston Naval Annex and the Fish Pier as well will only further congest the network of existing local streets. The configuration and alignment of the new road will determine the shape and location of development proposed for the industrial area of South

Boston. While the residents of South Boston are sympathetic to and, even in some instances, enthusiastic for the developments that are proposed in the old industrial areas, they are adamant in their opposition to the location of a stadium here. Instead they prefer development which will offer jobs and new opportunities for South Boston residents.

DOWNTOWN

The reuse of previous port areas in Downtown Boston for housing, offices and recreation has been underway for many years. This has accelerated in recent years as a result of both public and private investments. Virtually all of the new uses have transformed the aging shipping and warehouse areas into a revitalized part of Downtown.

Throughout Boston's history, this area has had constraints on its groundside access. Its very congestion has in part made it attractive to the people who seek it. Access to this portion of the waterfront is provided in significant part by the transit network; it is not particularly well served by the regional expressway network. The Central Artery is the only major highway serving this area and it, too, is very congested. As the downtown port area has increased in attractiveness and grown more congested, pressures have developed to

the environment through depressing the Artery in a tunnel and adding a new transit facility in the corridor. If the Artery is tunnelled, it will provide new transportation opportunities and also space for new development on the decks above it.

CENTRAL ARTERY

The Central Artery is the most important highway in Downtown Boston. It connects the region's major expressways and serves as a collection and distribution facility for the Downtown street system. The Artery serves the seaport areas of Charlestown and South Boston and with the existing harbor tunnels, provides access to the East Boston waterfront and to the airport as well.

The elevated Artery was built in the 1950's principally to provide improved access and relief to congestion on the Downtown street system. In the intervening period, an increasing proportion of traffic on the highway has become destined for places outside Downtown. With the decision to curtail additional expressway construction leading into Downtown, traffic pressure on the Artery has increased. At the same time, public sensitivity to environment and community disruption caused by the facility has grown.

Beginning in the early 1970's, a series of studies was conducted to determine what might be done to solve

these problems. Various alternatives inside and outside the existing corridor have been examined and it has been determined that reconstruction of the Artery in its present corridor is the only feasible option. These studies have been undertaken with the knowledge that the decks of the Artery will need full reconstruction within the next decade. Since deck replacement will provide massive disruption to existing traffic and the larger community, other alternatives have been examined. This reconstruction could take two basic forms: (1) replacement of the decks along with modest improvements to ramp locations and connections; or (2) construction of a new underground facility in the present alignment with the potential for adding an integrated transit way in the median of the new highway tunnel.

The costs associated with redecking of the Artery are approximately \$35 million. Although this cost is low in comparison to the complete reconstruction of the facility, the end product is the existing facility with upgraded decks and all of its present disadvantages to traffic and to the city.

Costs of the new facility would be over \$1 billion. While these costs would be funded with federal interstate assistance, the size of both the federal and state investment will be a major issue for both levels of government.

The issues posed by the need for improvements to the Artery are similar regardless of which course of action is chosen. The scale of the proposed reconstruction may bring extensive disruption during the construction period, but the proposed improvement brings many advantages to the movement of traffic through the Downtown area. New underground interchanges would avoid the present conflicts of regional traffic which is now using local streets for interchange connections. Noise and air pollution would be substantially reduced and controlled. Environmental amenities would enhance downtown renewal and rehabilitation efforts. New ramps and access facilities would be brought to national standards improving both the operations and the safety of the Artery. Additional land area would be created to link the Downtown commercial and waterfront areas and to increase the tax base and job creating potential of the city.

Local individuals and organizations have taken strong positions against new highways which encroach on existing neighborhoods. However, this stance has been modified in instances where the perceived impact of the transportation improvement is of benefit to the local community. In Charlestown, for example, the local community is fully supportive of the local Artery proposal to date, and is working in concert

with public agencies toward implementation of the proposed scheme. This is in contrast to the past when local people opposed port development because of anticipated truck impacts on local streets, and when highway schemes were opposed because they required the taking of homes.

Further south along the Artery, the North End community and the newly established Waterfront community have been at odds over revitalization efforts. The North End, with its established ethnic character, has evidenced major concern over traffic impacts on the local community and is wary of improvements which may enlarge benefits to other groups at their expense. At present, North End residents are cautiously in favor of further Artery studies, provided there are sufficient benefits after construction to warrant consideration of full reconstruction. Waterfront residents, by contrast, have been the beneficiaries of major redevelopment efforts, and new construction has been geared toward strengthening their portion of this neighborhood. Yet, waterfront residents exhibit the same degree of wariness about potential Artery improvements and will strongly urge their case for environmental improvements as studies proceed.

Unlike the neighborhoods which are cautiously open to the reconstruction of the Artery, the business groups concerned about transportation improvements voice more

reticence. Traditionally supporters of new highways, they are worried about the disruption to business that might occur during a lengthy reconstruction period.

SUMMING UP

The provision of adequate access has been the touchpin on which development has always hinged on the waterfront, and is as much an issue today as it was 100 years ago. Whereas, in the past the provision of access was a function undertaken either solely by the private sector or a joint public/private undertaking, today this area is solely in the domain of the public sector. The Highway Trust Fund has been the major source of monies available for road construction, but in the port area where there is a preponderance of channels, the cost of roads is significantly increased by the need for bridges. Over the long run, the concerns that are raised today are not so much in regard to the costs of building roads and bridges, but rather their long-term maintenance and improvement. Federal funds are available for large capital requirements, but interim maintenance must be provided out of local funds. The constraints on these funds diminish the enthusiasm of local jurisdictions for such new facilities. This issue is one which will require increasing attention in the near future.

CHAPTER 5
MANAGEMENT OF THE HARBOR

The arguments in favor of rationality suggest an overall harbor planning mechanism should be created. This is counterbalanced by the long entrenched tradition of home rule. Also, without any specific mechanism for the allocation of benefits and costs among jurisdictions or among population groups, no clear picture emerges even as to the policies that should underlie such a planning process. Existing mechanisms seem to be sufficient to allow for and to respond to the kind of incremental change that has characterized the way development and redevelopment of the waterfront has proceeded. While in San Francisco's Bay area there was a regional constituency concerned about the proposed accelerated development, the opposite problem exists in Boston where the need is to identify appropriate catalytic factors to enhance appropriate and desired development.

Studies have identified 130 governmental organizations-- federal, state and local -- which have some form of compulsory jurisdiction over one aspect or another of the harbor. The fact that there has been considerable redevelopment and revitalization in the past 25 years within this governmental context is testimony to the

persistence and enthusiasm of the public and private entities involved. Recognition of this complicated maze of planning, regulatory, financing and operating agencies has raised the question as to whether or not Boston Harbor is a legitimate entity for the focus of some comprehensive governmental mechanism which would determine its fate. This debate preceded Coastal Zone Management by a few years and a year after the Mass. Coastal Zone Plan has been adopted, the issue still remains unresolved. The strongest argument and the most powerful force that stands in the way is the tradition of home rule of communities in Massachusetts. Not only is home rule a question among the cities and towns which lie along the harbor; it is also a question among the individual neighborhoods of the City of Boston which front the harbor. In 1967, a Boston Harbor Commission was created by the Legislature to look at the possibility of creating a regulatory mechanism through which governmental decisions on development and conservation in the harbor would be controlled. Twelve years later, this legislation has been drafted but has not yet been submitted for debate. Legislation, not entirely dissimilar to the San Francisco Bay Conservation and Development Commission, drafted for Boston Harbor intended to create a mechanism which would weigh and allocate the benefits and costs among population groups

for the siting of a range of facilities along the waterfront. However, Boston Harbor is at a far different stage in its development than was San Francisco when the commission was created. In San Francisco the "Save the Bay" forces were reacting to an overstimulated market intent upon filling the bay to create the necessary land demanded for a wide range of uses. The situation was more analogous to what Boston faced a century ago when hundreds of acres were created by fill in Charlestown, East Boston and South Boston. In the 1960's and 1970's, however, it was the opposite problem that was in force. Acres of underutilized and vacant land lay open for development caused by the decommissioning of military facilities, changes in cargo handling technology, etc. Those concerned for Boston Harbor have had to face the question of how to make development happen on these sites and how to step up the pace of that development.

Those concerned about Boston Harbor realize that there are a number of unanswered questions that must be faced before any comprehensive mechanism can be put in place for dealing with harbor development. Some of the issues of priorities and goal conflicts that arise include such questions as: accepting that urban waterfront land is a finite resource, who should make decisions regarding its allocation? How should the priorities

of neighborhoods, the City of Boston, the metropolitan area and the New England region be traded off? Who should be accepted as representative of the interests of each group? Who should waterfront development benefit? Should recreational facilities be local or regional? Should housing be planned primarily for present residents of the area or should new groups be provided for? How can the unique needs for regional shipping and energy facilities be accommodated? What weight should be given to preserving space for future development?

In earlier periods of development, these issues, if they arose at all, were considerably simpler to resolve. In many cases, conflicts were minimized by simply creating new land. The primary prerequisite for successful development was adequate funding. Intervention of residential communities in development decisions impacting them is a recent phenomenon. More important, the perception of waterfront land as a scarce and highly desirable resource completely changes the development picture around the harbor.

ISSUES AND ALTERNATIVES FOR THE FUTURE

Development pressures for waterfront land in Boston are likely to continue to be strong in the next decade. Development pressure can be expected for two major types

of development: (1) traditional maritime, shipping and port uses requiring waterfront location on a main shipping channel; and (2) non-maritime, commercial, residential and recreational uses which are enhanced by waterfront locations such as the successful redevelopment of the Downtown waterfront.

Development proposals will require decision-makers to grapple with issues and problems in two major areas. The first are issues of compatibility; the impact of industrial and non-industrial uses coexisting on the waterfront, and of industrial port uses expanding adjacent to non-waterfront residential areas. These problems, all significant, are technically soluble.

The second are issues and questions of goals, priorities and decision-making authority. These questions must be grappled with if waterfront land use decisions are to be made, but in most cases they defy a definitive solution. Broad participation, negotiation and compromise will most likely provide the avenue to agreement on these matters.

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